

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7198162 B2
APPLICATION NO. : 10/608,279
ISSUE DATE : 04/03/07
INVENTOR(S) : FRANCOIS, JAMES A.

1 of 6

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The Title Page, showing an illustrative figure, should be deleted and substitute therefor the attached Title Page.

Delete drawings sheets 1-4 and substitute therefor the drawing sheets, consisting of figs. 1-6 as shown on the attached page.

Col. 5, line 32, "polyvinylchloride" should be
"polyvinyl chloride"



US007198162B2

(12) **United States Patent**
Francois et al.

(10) **Patent No.:** **US 7,198,162 B2**
(45) **Date of Patent:** **Apr. 3, 2007**

(54) **MOLDED CLOSURE AND APPARATUS FOR MAKING SAME**

(75) Inventors: **James A. Francois**, Evansville, IN (US); **Kerry W. Dodds**, Gentryville, IN (US)

(73) Assignee: **Rexam Medical Packaging Inc.**, Evansville, IN (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/608,279**

(22) Filed: **Jun. 27, 2003**

(65) **Prior Publication Data**

US 2004/0000532 A1 Jan. 1, 2004

Related U.S. Application Data

(62) Division of application No. 09/790,128, filed on Feb. 21, 2001, now Pat. No. 6,609,694.

(51) **Int. Cl.**
B65D 41/04 (2006.01)

(52) **U.S. Cl.** 215/329; 222/153.1

(58) **Field of Classification Search** 215/276, 215/214, 217, 350, 351, 329; 222/180, 153.06, 222/153.1, 562, 568; 249/59, 175
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

330,545 A 1/1885 Barker
1,844,442 A * 2/1932 Schmalz 215/329
2,130,749 A * 9/1938 Von Till 215/350

2,313,031 A 3/1943 Parkhurst
3,055,526 A * 9/1962 Plunkett 215/329
3,618,170 A 11/1971 Owens
3,690,496 A * 9/1972 Gibson 215/217
3,734,332 A * 5/1973 Grulich 215/208
3,784,045 A * 1/1974 Komendowski 220/277
3,827,593 A * 8/1974 Kramb et al. 215/208
4,209,485 A 6/1980 Greenspan
4,343,754 A 8/1982 Wilde et al.
4,564,113 A 1/1986 Mendler
4,579,241 A 4/1986 Hayes
4,649,013 A 3/1987 Yamamoto et al.
4,767,587 A 8/1988 Towns et al.
5,285,913 A * 2/1994 Morton 215/349
5,292,020 A * 3/1994 Narin 215/330
5,512,228 A 4/1996 Adams et al.
5,820,807 A 10/1998 Urnston
5,875,909 A * 3/1999 Guglielmini 215/350
6,523,720 B1 * 2/2003 Robbins, III 222/1

* cited by examiner

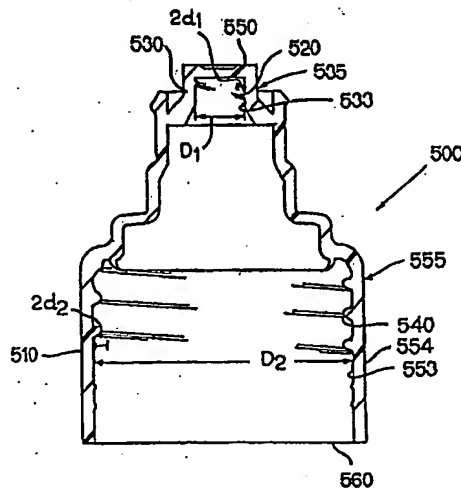
Primary Examiner—Lien M. Ngo

(74) *Attorney, Agent, or Firm*—James E. Cole; Middleton Reutlinger

(57) **ABSTRACT**

A molded closure having an auxiliary thread for removal of an incomplete closure from a molding cavity, the molded closure including a helical auxiliary thread projecting inwardly from a cylindrical wall portion of the closure to provide engagement between the closure and the molding core, so that the closure may be threadably removed from the molding cavity by threadably disengaging the molding core from the molding cavity after an incomplete run of the fabrication process. A molding assembly with which the auxiliary thread may be formed in a molded closure is also provided.

1 Claim, 4 Drawing Sheets



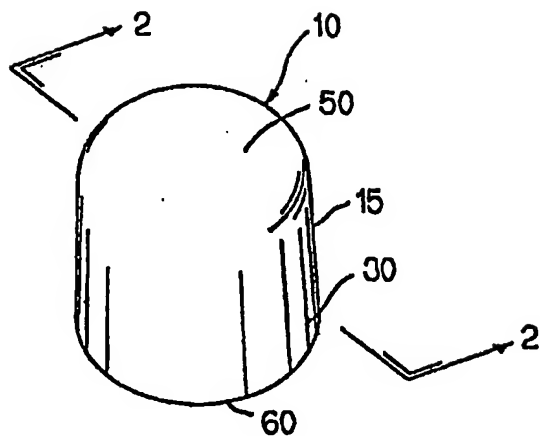


FIG. 1

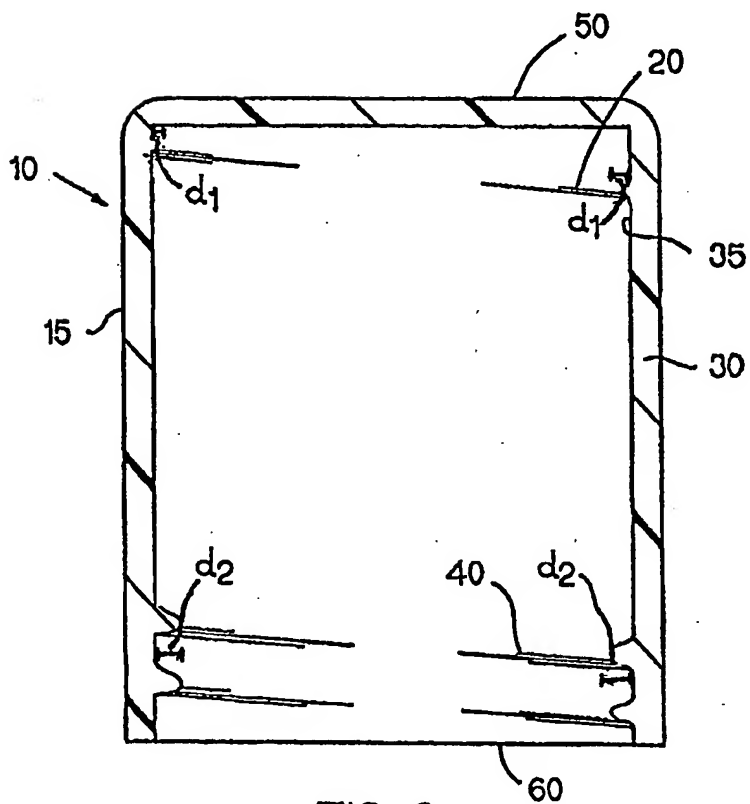


FIG. 2

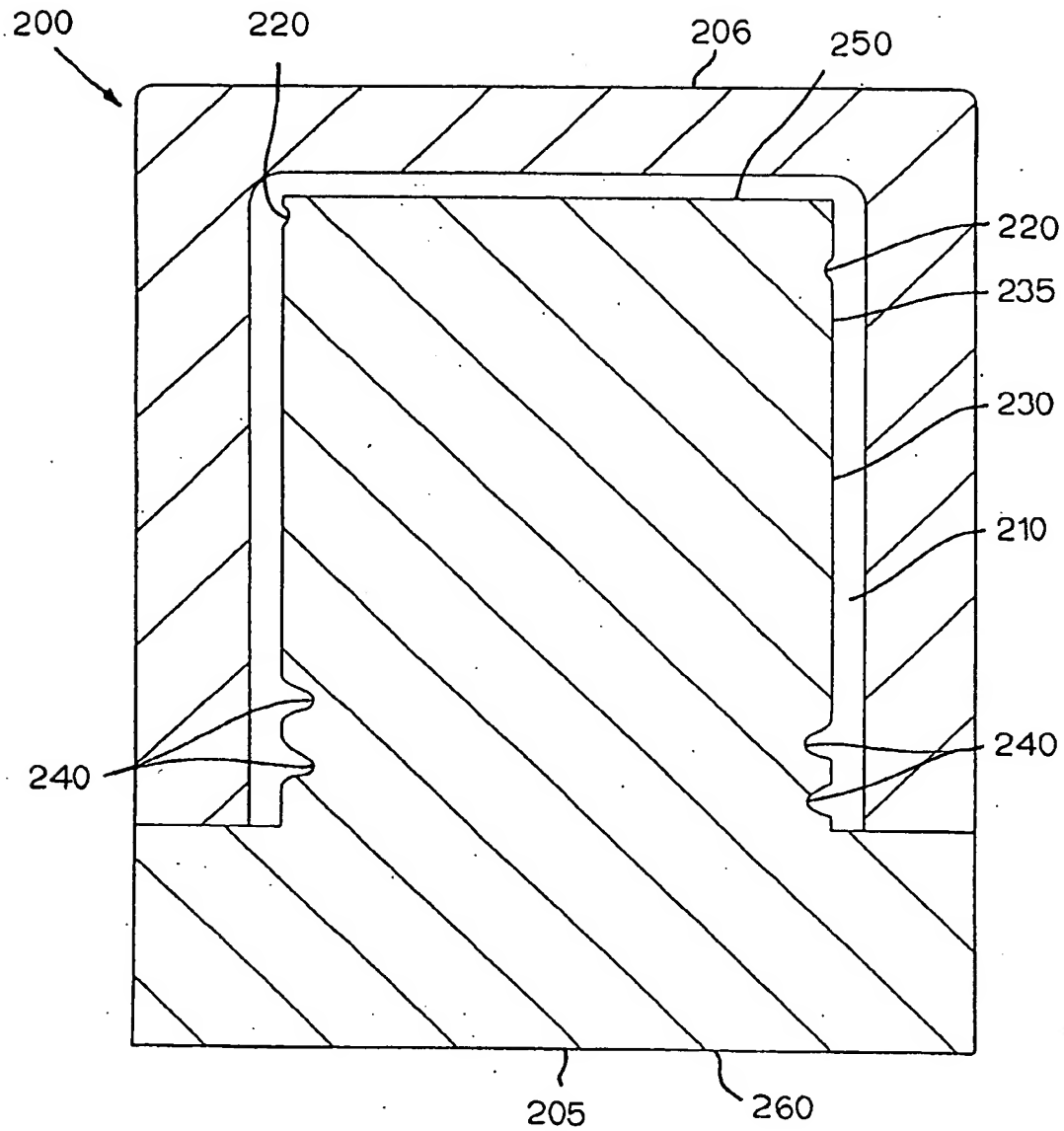


FIG. 3

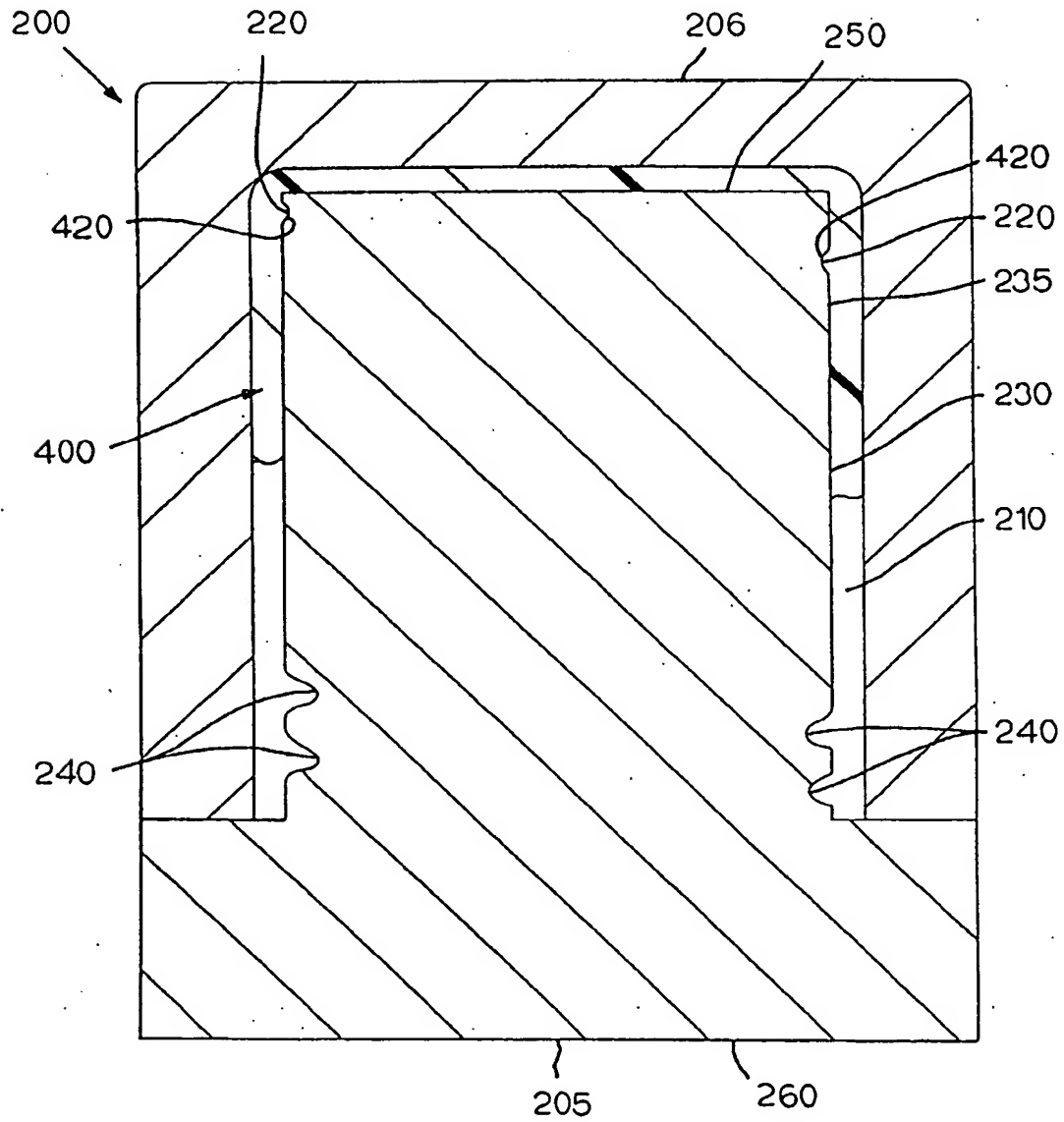


FIG. 4

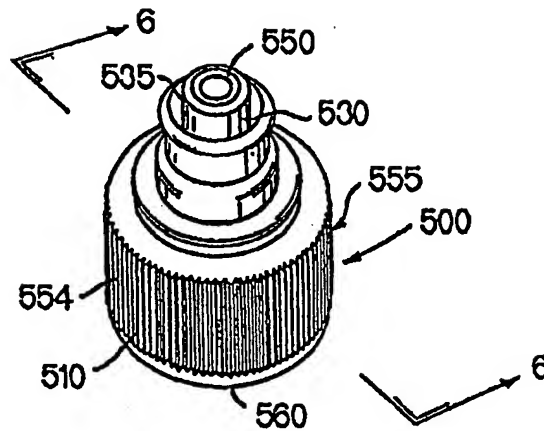


FIG. 5

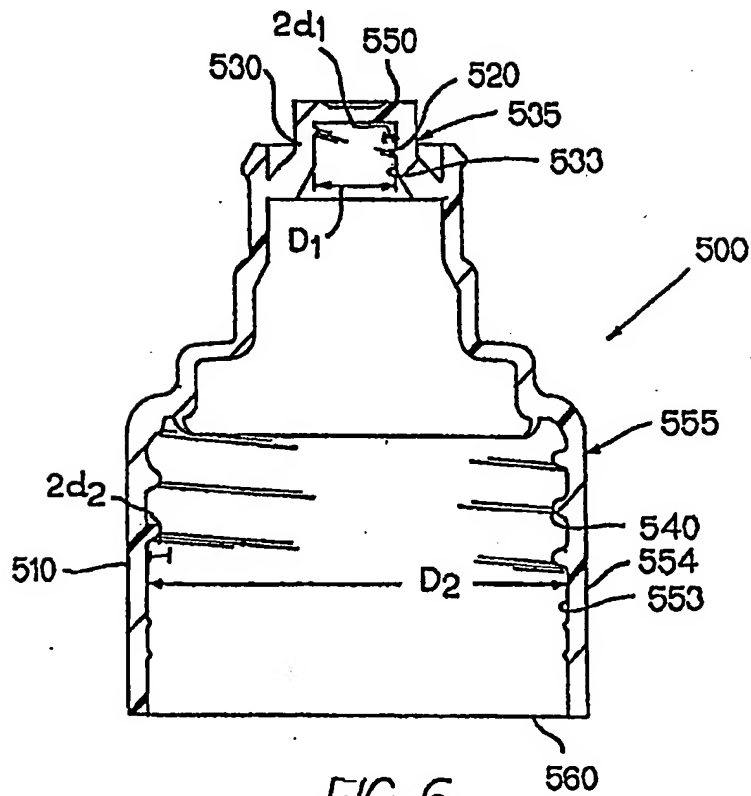


FIG. 6